formation. Symptoms which are due to interference with nutrition or pressure we cannot expect to influence. When salvarsan is employed it should be done so intensively and combined with mercury. The criticism of certain writers against the employment of salvarsan in the secondary stage of syphilis is entirely fallacious, for we know that when it is given in the proper manner combined with mercury, the so-called neurorecidives do not occur. In an experience of over two years, during which this method of treatment has been followed, not a single case of nerve recurrence has been observed. The cases submitted show that it is possible in some instances by intravenous medication alone to influence the clinical and serologic findings, and when this does not take place the only alternative may be intraspinal medication. Until we are more familiar with the effects of serum fortified, *in vitro,* the Swift and Ellis method of salvarsanizing serum, *in vitro,* should be the one of choice. In certain cases the serum from a patient so treated may be reinforced with from 0.25 to 0.5 mg. of salvarsan. It must always be borne in mind that the spinal cord reacts intensively to irritants even of a mild grade. When a degenerative process is present the resistance of the cord is much below that of a normal one and the brunt of the irritation falls on the degenerated areas. Fordyce is convinced that the intelligent and energetic treatment of the infection in the early stages properly controlled by the serum reaction would do much to prevent the subsequent development of nerve syphilis. It must, however, be thorough to eliminate the possibility of residual foci, which experience has taught have a predilection for the meninges. The early history of salvarsan shows that these accidents occur more precipitately after its use than under the older and milder methods of treatment.

The Use of Salvarsan in Non-syphilitic Diseases.—BEST (*Jour. Amer. Med. Assoc.*, 1914, lxiii, 375) reviews the literature regarding non-syphilitic diseases treated with salvarsan. The list of diseases is a long and varied one, even though apparently incomplete. The diseases treated by the author include cases of anemia, chancroid, chyluria, elephantiasis, epithelioma, erythema multiforme, leprosy, lupus vulgaris, pityriasis rubra, psoriasis, tuberculosis, and trichinosis. The author states that it is justifiable to formulate the following rules for the use of salvarsan in non-syphilitic diseases from the study of the reported cases including those personally observed by him. Salvarsan is specific in diseases caused by any variety of spirillum. Salvarsan has curative properties in those diseases in which the infecting organisms are found in the blood or lymph, or in other locations where they can be easily reached. Salvarsan has great therapeutic value in those diseases in which arsenic has been successfully used. Salvarsan, if used with caution in repeated doses over a long period, has a therapeutic value in those diseases in which previously arsenic gave indifferent results. Salvarsan, used as an adjuvant to some other drug or drugs, is useful in those diseases in which a decided and quick tonic, stimulating and alterative effect is desired, depending on the other drug or drugs for the ultimate result. The mode of administration is important and should be as follows: intravenous in those diseases in which a specific action is desired; full dose intramuscular injections repeated once or twice at long intervals (eight weeks), in those cases in which the tonic, stimulating and alterative effect is desired, as well as a certain specific action; small, oft-repeated (week or ten days) doses, intramuscularly, over a long period of time, in those chronic diseases in which a purely tonic, stimulating, and alterative effect is desired.

The Use of Small Doses of Salvarsan in the Treatment of Secondary Anemia and Nutritional Disturbances.—Kall (*Münch. med. Woch.*, 1914, lxi, 1506) has had good results with the injection of very small doses of salvarsan in cases of secondary anemia and malnutrition. He gives the salvarsan in doses never more than 0.05 or 0.075 gm. and believes it is a very simple and effectual method of giving arsenic. His usual practice is to give from ten to fifteen injections and to repeat the course after an interval of several weeks.

The Roentgen-ray Treatment of Tuberculous Glands.—Mowat (*Brit. Med. Jour.*, 1914, 2792, 10) says that the great advantage of roentgen-ray treatment of tuberculous glands is that it saves the patient the unpleasantness of undergoing in many instances a severe operation. The results are equally satisfactory whether the glands are large or small, numerous or scanty, superficial or deep, because by means of filters the penetrating power of the roentgen rays can be controlled and by using hard tubes those glands deeply situated can be reached. Even when the glands have broken down, marked improvement has resulted in some of the author's cases. The details of the technique used in applying the roentgen rays are noted in the article. The cases may be treated as often as twice a week. Many of the cases treated by the author were only seen once a week or even less frequently, and Mowat believes that even more rapid cures would have resulted with more intensive treatment.

Clinical Observations on Strophanthin.—Johannessohn and Schaechtt (*Deutsch. med. Woch.*, 1914, xl, 1412) in view of the excellent results obtained by the use of strophanthin intravenously, have endeavored to find a preparation of strophanthin that is active when given by mouth. The uncertainty of action of most preparations of strophanthin when given by mouth has been explained by possible injury produced by the digestive fluids. It was found experimentally that the enzymes, pepsin and pancreatin did not inhibit the action of strophanthin but that the acidity and alkalinity of the juices were alike able to weaken its action. The authors experimented with the so-called g-strophanthin of Thom that may be given in larger doses than other varieties of strophanthin. The intravenous dose is double that of other preparations and the dose by mouth is three or four times greater. They found that, *in vitro*, this strophanthin was not inhibited by any of the digestive fluids, either acid or alkaline. They concluded from their clinical observations that this preparation was very rapid in its action when given by mouth. Its diuretic action was marked and in consequence striking results were obtained in cases of edema and ascites, in very short periods of time. The cardiac stimulent action was similar to that of digitalis. No cumulation was observed and is less to be feared than with digitalis, for strophanthin is excreted more rapidly.